JOURNAL COLLOQUIUM TOPICS OFFERED to PMCB STUDENTS in FALL 2021

1. AGR 6932 - TOPICS in AGRONOMY: JOURNAL CLUB FOR CROP BIOTECH (1 credit)

Course Overview: This Journal club will focus on analyzing the primary literature in crop biotechnology and advanced CRISPR/Cas genome editing technologies and aims to develop key skills such as reading and interpreting primary literature, oral presentation of scientific results and professional development.

Topics: Tissue culture: impact of regulatory networks on tissue culture response and Ectopic expression of morphogenic genes used to enhance transformation in recalcitrant genotypes/crops, Common gene transfer technologies, Improvements of Agrobacterium mediated gene transfer with auxotrophic Agromutants, Impact of particle density on biolistic gene transfer and transgene expression, Comparison of Agrobacterium mediated and biolistic gene transfer, RNAi for crop improvement, Transgenic approaches for crop improvement, Pathway engineering for development of new products and value added crops, Genome editing technologies (Targeted mutagenesis, Precision nucleotide substitutions by HDR, Base editing Prime editing), Design of editing experiments and analysis of the genome editing outcome, Genome editing for crop improvement.

Learning Outcomes: After completion of this journal club students will be able to carry out critical evaluation of professional literature in plant biotechnology, explain enabling technologies for biotech approaches, deliver scientific presentations and lead discussions in crop biotechnology.

Instructor: Dr. Fredy Altpeter, Professor, Agronomy, altpeter@ufl.edu, Office-3085 McCarty B, ph. 352-273-3418, https://agronomy.ifas.ufl.edu/fredy-altpeter/

Meeting Times, Location and Mode of Delivery: This course will be delivered synchronously online via Zoom on Thursdays, period 4 (10:40 AM - 11:30 AM). The Zoom meeting identification and password will be available through the course Canvas site at https://elearning.ufl.edu.

Course Registration:
Agronomy departmentally controlled course.
Class Number: 10285; Section: JCBR or Class Number: 10284, Section: JCBG
Enrollment cap: 16 per section.
Request enrollment with Danielle Adams at dadams1@ufl.edu

Course syllabus click HERE, course flyer click HERE

2. GMS 5905 – SPECIAL TOPICS IN BIOMEDICAL SCIENCES: METHODS IN GENOMIC DATA ANALYSIS (1 credit)

Course Description: This journal club is a series of guided paper reviews on statistical methods in OMICS. The goal is to assist students in learning to critically read statistical methods in omics data analysis. This highly structured experience requires student answer a series of directed questions and pose questions of their own – and turn in these written responses by Tuesday at 3pm. 75% of the grade will be based on these written assignments prior to the discussion. The discussion will focus on the student questions, and underlying statistical concepts. Several of the classes will include a guest
appearance of an author of the week’s primary paper. Note that this paper discussion group will not teach hands on skills but rather focuses on how to read and understand assumptions and basic statistical concepts for each presented OMICS analyses. The course relies on both basic statistics in textbooks and the primary literature and students will be expected to read and learn independently to fill in any missing background. Additional background material will be provided, topic dependent. Weekly the average reading load will be one primary paper with supporting materials. This class has 14 meetings and the following

**Topics:** Genome Annotation, GWAS, Differential Gene Expression, Gene Expression Networks, Computational Compound Identification In Metabolomics, Multiomics Data Analysis, Experimental Design For OMICS.

**Instructor:** Dr. Lauren McIntyre, Professor, Molecular Genetics & Microbiology Department, mcintyre@ufl.edu, (352) 273-8024, http://mgm.ufl.edu/faculty/mcintyre-lauren/

**Meeting Times, Location and Mode of Delivery:** Thursdays, 3:00 pm, R2-265, hybrid mode

**Registration:**
Departmentally controlled course by Medicine, Depart. of Mol. Genetics & Microbiology

Request enrollment with Kris Minkoff at kminkoff@ufl.edu, (352) 273-6380

**NOTE:** Students can register for a 3 credit course (GMS 6867) or a 1 credit journal club (GMS 5905).

For GMS 5905 syllabus click [HERE](#) (for GMS 6867 click here)

3. **ALS 5905 INDIVIDUAL STUDY: SWREC JOURNAL CLUB (1 credit)**

**Course Description:** This course is intended to improve graduate student’s data interpretation and critical review. In this course, the students will critically evaluate most recent scientific papers, discussing the merit, writing style, data presentation, and results, making constructive criticism to improve the manuscript quality and increase scientific writing performance. In order to obtain graduate credit for this course, the students must complete a presentation and a critical review of journal articles in their research area. This will be done at a weekly meeting time and attendance of all SWFREC graduate students is required. To begin, we will meet to discuss how to critically review a recently published article. Then, the instructor will present a critical review to students as an example. The instructor will then help each of the students select articles to present and critically analyze in a journal club format. Active participation of each student will be encouraged.

**Instructor:** Dr. Ozgur Batuman, UF/IFAS Southwest Florida Research and Education Center (SWFREC), Immokalee, FL. Email: obatuman@ufl.edu

**Teaching Assistant:** Salih Yilmaz, Email: salihyilmaz@ufl.edu

**Meeting Time and Location:** Friday, 3 to 4 PM, Conference Room A, Southwest Florida Research and Education Center, Immokalee, FL. Note that due to the Covid-19 pandemic and to comply with UF and CDC regulations, meetings will be via Zoom and/or Teams virtual meeting until further notice. (Subject to change based on availability of students, determined prior to the semester).

**Enrollment cap:** Maximum of 10 students in person (no limit virtually)

For syllabus click [HERE](#)